UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF
LU-16J

July 19, 2018

**VIA CERTIFIED MAIL #70171450000137479844**
**AND ELECTRONIC MAIL**
**RETURN RECEIPT REQUESTED**

Mr. Cary Mathias
Regional Waste Manager
ArcelorMittal USA
4020 Kinross Lakes Parkway
Richfield, Ohio 44286-9000

**Re: Data Sufficiency Evaluation – Indiana Harbor Long Carbon**
**ArcelorMittal USA LLC – Indiana Harbor East**
**EPA ID No. IND 005 159 199**

Dear Mr. Mathias:

The U.S. EPA has reviewed the Data Sufficiency Evaluation (Evaluation) submitted by Haley & Aldrich, Inc. on behalf of ArcelorMittal USA LLC on May 30, 2018. EPA' s review focused on technical consistency and adherence to EPA policy and regulations. Comments on the Evaluation are enclosed. EPA requests that you review the comments and submit a response within the next 60 days.

If you have any questions regarding this letter, feel free to contact me at (312) 353-9229 or Melissa Blankenship at (312) 886-9641.

Sincerely,

Brandon Pursel
Project Manager, Corrective Action Section 2
Land and Chemicals

Enclosure

cc: John R. Hill (ArcelorMittal USA)

**EPA TECHNICAL REVIEW**
**MAY 2018 DATA SUFFICIENCY EVALUATION-INDIANA HARBOR LONG CARBON**
**ARCELORMITTAL USA LLC**

EPA has conducted a technical review of the May 2018 Data Sufficiency Evaluation for the ArcelorMittal USA LLC Facility (Facility) in East Chicago, Indiana. The Evaluation was submitted in accordance with the RCRA Facilities Investigation Remedy Selection Track (FIRST) - A Toolbox for Corrective Action (May 2016) guidance. The purpose of this document is to facilitate decision making regarding efforts to redevelop the Indiana Harbor Long Carbon sub-parcel (IHLC).

## GENERAL COMMENTS

ArcelorMittal conducted an evaluation to determine whether data collected during the site-wide RFI is adequate to proceed with the RCRA Corrective Action process at the IHLC sub-parcel. The process relies on sound data collection, adequate density of sample locations and sound data analysis to provide justification for the selection of one or several of the myriad of remedial options and protective measures available to address contamination at IHLC.

In November 2017, ArcelorMittal met with EPA to discuss next steps in the RCRA Corrective Action process it needed to take to pursue the sale of IHLC for redevelopment. EPA determined that the Evaluation would be an appropriate first step. Upon review of the Evaluation, EPA determined that certain data gaps need to be addressed, before proceeding. ArcelorMittal indicates that historic sampling data provides adequate information about the nature and extent of contamination, especially in areas where contamination was not detected, however EPA believes that verification sampling (as specified below) at select locations is necessary before proceeding onto the next step of the corrective action process.

**Data Gap 1**
Potential source areas of contamination were identified near monitoring wells IMW-02-00001, IMW-02-0004 and IMW-03-00029 and in the vicinity of the Water Cooling Tower (Figure 6 - Summary of Exceedances in Groundwater). The Evaluation indicates in subsequent monitoring events that contamination is confined to the proximity of these wells. Due to the change in land use, and because subsequent sampling events were limited in scope and frequency, verification sampling must be performed to confirm that concentrations are stable or decreasing as AME has asserted. Any sampling or verification should be performed in accordance with a groundwater sampling verification plan.

**Data Gap 2**
EPA understands that no direct measurement of indoor air concentrations due to groundwater contamination has been taken, however, AME asserts the likelihood of on-site risk to be low due to other controlling factors. Quantifiable measurements must be taken in accordance with the June 2015 guidance document OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air. A work plan should be provided that includes co-located sub-slab and indoor air samples collected for VOCs using the TO-15 method where buildings are present.

**Data Gap 3**
As the IHLC area is planned to be redeveloped, ArcelorMittal must submit a human health conceptual site model specifically for this parcel and identify the potential source areas as well as the likely migration pathways. Soil samples at different depth intervals should be taken to assess the risk associated with exposure to industrial workers, construction workers and redevelopment workers. While the worker protection program for excavation workers is intended to stay with the property, it relies on an understanding of what exists in the subsurface. Taking into consideration EPA's comment in Data Gap 1, a cumulative risk characterization from all exposure media should be presented for each commercial/industrial worker scenario to summarize this understanding.

## SPECIFIC COMMENTS

### Section 2.2.2 Steel Finishing

1. *Petroleum based lubricants were used throughout the Bar Mill operation.*

   **EPA Comment**
   For completeness, please expand this section to include a general description of the use of lubricants were used across IHLC. While methane may also be a biogenic substance, it is necessary to be able to distinguish whether it is an indicator of possible impacts or a byproduct of degradation from historical impacts of petroleum products.

### Section 2.2.3 Steel Roll Refurbishing

2. *When in use, PCE was stored in an above ground storage tank (AST) formerly located west of the No. 6 Roll Shop.*

   **EPA Comment**
   For completeness, expand this section to also include and storage activities pertaining to trichloroethylene (TCE) and other degreasing chemicals used at IHLC. Also expand the discussion to include whether TCE or PCE was used primarily more frequently in operations at IHLC.

### Section 3.1.2 Site Geology

3. *Methane has been reported throughout much of this silty sand unit. The presence of methane was inferred by soil sample headspace screenings in which elevated readings were measured with flame ionization detectors (FIDs), while measurements with photoionization detections (PIDs) indicated non-elevated results. This combination of results is generally considered to be indicative of methane, typically resulting from the decomposition of organic matter. The presence of methane is consistent with the low dissolved oxygen content and strong reducing conditions that were typically observed in groundwater collected from this horizon. The apparent presence of methane in non-impacted wells suggests that the methane may be, at least partially, naturally occurring, and that soil sample headspace screening may not be indicative of chemical impacts to the soil/groundwater.*

**EPA Comment**
This statement is somewhat misleading. The reader is led to believe that direct measurements of methane have been taken, however data submitted to EPA does not reflect this. It is concluded that any methane is likely biogenic based on this inference, although it is also appropriate to infer that historic releases of petroleum products may also be responsible for FID readings. Revise this statement to include the likelihood that petroleum products may be responsible for any methane production based on all available data at IHLC.

**Section 3.6.6 Sediment**

4. *...the U.S. EPA and ArcelorMittal have agreed that relative to RCRA Corrective Action at the IHE facility, assessment of the IHSC and Indiana Harbor sediments is not relevant because:*

   - *As part of SEPs established by the Consent Decree, discussed previously in Section 1.5, ArcelorMittal will remediate working dock face sediments. The remainder of the IHSC and Turning Basin will be remediated by the U.S. Army Corp Of Engineers with funds supplied PRPs; and*
   - *The contribution, if any, from the IHE facility, thereby the IHLC property, cannot readily be distinguished from the documented upstream sediment loading from other industrial facilities.*

   *Therefore, based on the above, of this exposure pathway is incomplete for the IHLC property.*

   **EPA Comment**
   While somewhat outside of the scope of this document, it should be noted that this statement does not support the conclusion that there is an incomplete pathway for sediment impacts. Efforts to remediate aggregate contributions to sediment contamination does not create an incomplete pathway. Rather, it is an effort to correct possible but unconfirmed contributions by ArcelorMittal at the IHLC (and site-wide) to sediment in the Indiana Harbor Shipping Canal. Furthermore, because sources of contributions have not been distinguished it is premature to state that there is no complete pathway. It would be more appropriate to state what controls are in place to prevent future impacts to sediment from the IHLC, especially considering the dredging work to be completed in the IHSC.

**Section 4 RCRA Facility Investigation Data Sufficiency Evaluation**

5. **EPA Comment**
   It is important to recognize through the development the responses to these questions that ArcelorMittal is currently in the process of updating its QAPjP. The responses to these questions can only be reasonably answered within the scope of approved SAPs and QAPPs, however ArcelorMittal should be prepared to respond to any deficiencies if updates to the QAPP affects data sufficiency. This would include assessing data outliers and updating procedures to address them.

6. *Based on a review of the Phase I and Phase II RFI Reports and subsequent U.S. EPA comments and ArcelorMittal responses, no concerns associated with insufficient sampling of COCs were expressed by the U.S. EPA for the IHLC property. Further, based on the information presented herein, COCs appear to have been fully assessed.*

   **EPA Comment**
   EPA has not expressed concerns regarding the assessment of COCs at IHLC, however this is primarily due to the expectation that land use would not change. With ArcelorMittal seeking options for redevelopment and a change in land ownership, EPA believes confirmation samples at all areas where exceedances of applicable on-site screening criteria have been detected are appropriate before this question can be reliably responded to.

7. *Based on a review of the Phase I and Phase II RFI Reports and subsequent U.S. EPA comments and ArcelorMittal responses, no concerns were communicated by the U.S. EPA related to insufficient sampling of impacted or potentially impacted media. Further, based on the information presented herein, the extent of contamination has been reasonably bounded at the IHLC property. Based on the review of the Phase I RFI and Phase II RFI findings, summarized herein, the remaining impacts in on-site groundwater do not appear to be increasing in extent or in concentration.*

   **EPA Comment**
   See the above comment. While EPA acknowledges that existing contamination may not cause an unacceptable risk, it is still good practice to confirm that existing contamination detected at impacted wells IMW-02-00001, IMW-02-00004 and IMW-03-00029 has remained stable or decreased prior to seeking a change in land ownership.

**Table 3 Summary of Exceedances in Groundwater**

8. **EPA Comment**
   Detections of cis-1,2-dichloroethene above Maximum Cleanup Levels (MCLs) is missing from this table. Despite being below site specific screening criteria to denote risks to likely receptors, inclusion of this compound is warranted considering the fate and transport of other chlorinated solvents.